

REMARKS

Claims 1-7, 20-26, 39-45, 49-57, 62, 63, 68, 69, and 72-81 are all the claims presently pending in the application. Claims 8-19, 27-38, 46-48, 58-61, 64-67, 70, and 71 are canceled without prejudice or disclaimer. New claims 74-81 are added.

It is noted that the claim amendments, if any, are made only to assure grammatical and idiomatic English and improved form under United States practice, and are not made to distinguish the invention over the prior art or narrow the claims or for any statutory requirements of patentability. Further, Applicant specifically states that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 1-2, 5-8, 10-13, 16, 20, 21, 24, 26, 27, 30-32, 35, 38-40, 43, 45-50, 53, and 55-73 stand rejected under 35 U.S.C. §103(a) over Veerasamy, et al. (US Pat. App. Pub. No. 2004/0203855), in view of Ma, et al. (US Pat. App. Pub. No. 2003/0148765). Claims 3-4, 9, 14, 15, 17, 19, 22, 23, 28, 33, 34, 36, 41, 42, and 51-52 stand rejected under 35 U.S.C. §103(a) over Veerasamy, further in view of Ma, and further yet in view of well known prior art (MPEP 2144.03).

These rejections are respectfully traversed in the following discussion.

THE CLAIMED INVENTION

As described in, for example, independent claim 1, the claimed invention is directed to a method of collecting information used for adjustments with an information collecting server in a radio communication system connected to at least one mobile radio terminal for performing user communications.

The method includes, in said mobile radio terminal, monitoring a communication status using a traffic channel. The communication status corresponds to whether or not the mobile radio terminal has an existing communication connection using the traffic channel which satisfies predetermined criteria. The trigger is detected when a change of the communication status has satisfied a predetermined condition of one of the predetermined criteria.

A reception status of a radio signal is acquired and a coordinate position of the mobile

radio terminal is acquired. Information is sent to the information collecting server, including the reception status and the coordinate position.

As described beginning at line 10 on page 1 of the Application, for maintenance and optimization of radio communication systems, there is a need to acquire information related to reception status throughout the system service areas. Various conventional methods are known to collect reception status information from user mobile terminals. However, as described in lines 3-6 on page 5, these conventional methods typically fail to appropriately recognize causes of changes in the reception status and phenomena brought about by changes in the reception area.

In contrast, the present invention provides a method wherein user mobile radio terminals are equipped with monitoring capability for a plurality of criterion, thereby providing data for a plurality of different conditions. The information reported by the present invention includes both reception status information and coordinate position of the user mobile radio terminal. As explained at lines 9-11 of page 14, such enhanced capability using these two reported information types permits different types of maps of the service area to be developed.

THE PRIOR ART REJECTIONS

All claims rejected herein stand rejected under 35 U.S.C. §103(a) over Veerasamy in view of Ma, or, alternatively, over Veerasamy in view of Ma and further yet in view of “well known prior art.” Applicant respectfully traverses these rejections.

Veerasame

To improve service quality for a wireless network, eliminating coverage hole areas is required. In the coverage hole, a mobile station (MS) faces a serious communication loss, such as a call drop and/or a service loss.

Wireless service providers have a need to monitor the coverage hole for improving their service. To monitor the coverage hole, in Veerasamy, the mobile station, which detects the call drop or the service loss, reports the location and time corresponding to the call drop and the service loss to a base station.

Ma

Ma's invention relates to a handoff technique of a wireless network system. In Ma, a base station determines whether the handoff is necessary or not, according to the signal strength of a pilot signal. Therefore, a mobile station needs to measure the signal strength of the pilot signal and report the same to the base station. If the signal strength of the pilot signal from one base station exceeds a threshold value, then the base station may determine that handoff from a current base station to a new base station (e.g., a neighboring base station) is required.

The Prior Art Rejections

As best understood, since the claim numbers are not consistent in the latest rejection of record, the Examiner alleges that Veerasamy, when modified by Ma, renders obvious claims 1, 2, 5-8, 10-13, 16, 18, 20, 21, 24-27, 29-32, 35, 37-40, 43, 44-50, 53-73, and, when further yet modified by "well-known prior art", renders obvious claims 3, 4, 9, 14, 15, 17, 19, 22, 23, 28, 33, 34, 36, 41, 42, 51, and 52.

Applicant respectfully disagrees.

Neither Veerasamy nor Ma discloses or suggests that a mobile station reports both the quality-related information and location-related information. In contrast, in the present invention, both of the quality-related information and the location-related information are reported as measured information.

That is, as described above, Veerasamy discloses that the mobile station (MS) reports location and time corresponding to the coverage hole, and Ma discloses that the MS reports the signal strength of the pilot signal for determining the necessity of a handoff. Neither reference, however, teaches or suggests reporting both the quality-related information and the location-related information together.

Therefore, from Veerasamy, one of ordinary skill in the art, at the time of the invention, would never have conceived of an idea that the MS should report location and time, and further yet reports quality-related information. In other words, there is no motivation or suggestion in Veerasamy for reporting location, time, and quality-related information together.

None of the other references of record overcomes this fundamental deficiency of

Veerasamy.

Hence, turning to the clear language of the claims, in Veerasamy there is no teaching or suggestion of: "... sending information including said reception status and said coordinate position to said information collecting server", as required by independent claim 1. The remaining independent claims have similar language.

A reason that no motivation exists is that an object of Veerasamy's invention is to determine the coverage hole area (see paragraphs [0003, 0006, 0007, etc.]). To determine the coverage hole area by the service provider, it is enough (i.e., sufficient) if the MS reports the location and time corresponding to the call drop or service loss. Thus, in Veerasamy, reporting the quality-related information (i.e., reception status information) is meaningless for determining the coverage hole area. It is enough to determine the coverage hole area by reporting the location and time corresponding to the call drop/service loss event. Since the call drop/service loss event means that communication quality is substantially a minimum (see paragraph [0003] lines 8-13), there is never a need or motivation (absent the Examiner's impermissible hindsight) to report a quality of the radio signal by Veerasamy.

In the secondary reference Ma, one of ordinary skill in the art would never have conceived of an idea that the MS should report the signal strength of the pilot signal, plus location. In other words, there is no motivation or suggestion for reporting both signal strength and location together. As such, Ma fails to make up for the deficiencies of Veerasamy.

A reason that no motivation exists is that in Ma the MS reports the signal strength of the pilot signal to the base station, and the base station determines whether a handoff is necessary (see paragraph [0004]). If the signal strength of a pilot signal from one base station exceeds a threshold value, the base station determines that the handoff from the current station to a new base station (e.g., a neighboring base station) is required.

In other words, it is determined which base station is better to establish a communication link with the MS according to the signal strength of the pilot signal. Since the signal strength of the pilot signal is substantial (i.e., sufficient or enough) criterion to determine whether the handoff is necessary, then one of ordinary skill in the art would simply have no need or motivation to report a location together with the signal strength of the pilot signal. Thus, such an assertion by the Examiner is based simply on impermissible hindsight

by reading Applicant's own disclosure.

In the rejection of record for claim 1, the Examiner alleges that it "... would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Veerasamy in the format claimed, for the purpose of providing an efficient communication system."

Applicant respectfully submits that the above-recited rationale lacks merit, since primary reference Veerasamy already provides an efficient communication system.

Moreover, the objects of Veerasamy's and Ma's inventions are fundamentally different from each other. That is, the object of Veerasamy is to determine the coverage hole area, and the object of Ma is to determine whether a handoff is necessary, according to the signal strength of the pilot strength. Therefore, these two references are non-analogous.

Further, Veerasamy fails to teach or suggest any motivation to report the quality of the radio signal with the location, and Ma does not teach or suggest any motivation to report the location with the signal strength of the pilot signal. Therefore, there would have been no reasonable suggestion or motivation to combine these two unrelated references, and the present invention would not have been obvious from the Veerasamy and Ma references.

Finally, Applicant respectfully submits that, since the Examiner's rationale for combining Ma with Veerasamy lacks any reasonable technical basis or support or nexus with the urged modification, this rationale is improper by reason of being a mere conclusory statement. Such conclusory statements are addressed in the wording from the recent CAFC holding of *In re Vaidyanathan*, No. 2009-1404, Serial No. 10/259,203, decided May 19, 2010 (disposition not precedential; emphasis by Applicant):

"Obviousness is determined as a matter of foresight, not hindsight. See id. at 421 (citing Graham, 383 U.S. at 36). KSR did not free the PTO's examination process from explaining its reasoning. In making an obviousness rejection, the examiner should not rely on conclusory statements that a particular feature of the invention would have been obvious or was well known. Instead, the examiner should elaborate, discussing the evidence or reasoning that leads the examiner to such a conclusion."

Applicant respectfully submits that, as in the present evaluation, the failure by the Examiner to provide a reasonable rationale based on sound engineering concepts in the reality of the primary reference and having a reasonable nexus to the urged modification constitutes an improper conclusory statement, since, to one having ordinary skill in the art,

the Examiner has failed to provide any reasonable evidence or reasoning that leads the Examiner to consider that Ma would somehow benefit primary reference Veerasamy.

Applicant further submits that the present invention extends the capabilities of the convention methods such as discussed in Veerasamy by providing a plurality of conditions, each of which can be used as data for its respective map of the service area of the system, as more positively described in various new claims. Neither Veerasamy nor Ma makes such suggestion. Therefore, unlike the Veerasamy and Ma references, the present invention has a proper engineering reason for transmitting both reception status and said coordinate position.

Relative to the rejection of claims 3, 4, 9, 14, 15, 17, 19, 22, 23, 28, 33, 34, 36, 41, 42, 51, and 52, wherein the Examiner is understood as having invoked Official Notice, Applicant respectfully requests that the Examiner provide a reasonably combinable reference to support this rejection. Applicant respectfully challenges that the details of these claims are known in the art in the context of the claimed invention, wherein these events and conditions are used for triggers as described in the claims.

In view of the foregoing, Applicant submits that there is at least one element that is not demonstrated in Veerasamy or any other reference currently of record, and the Examiner is respectfully requested to reconsider and withdraw all rejections based on Veerasamy in view of Ma or any other prior art of record.

Moreover, new claims 74-81 are also patentable over Veerasamy, both for the reasons described above and for each being patentably distinguishable over Veerasamy.

CONCLUSION

In view of the foregoing, Applicant submits that claims 1-7, 20-26, 39-45, 49-57, 62, 63, 68, 69, and 72-81, all the claims presently pending in the application, are patentably distinct over the prior art of record and are allowable, and that the application is in condition for allowance. Such action would be appreciated.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned attorney at the local telephone number listed below to discuss any other changes deemed necessary for allowance in a telephonic or personal interview.

Application No. 10/700,483

Client Docket: NEC03P166-RIa (Attorney Docket: WAK.119)

To the extent necessary, Applicant petitions for an extension of time under 37 CFR §1.136. The Commissioner is authorized to charge any deficiency in fees, including extension of time fees, or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,



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